

WHAT IS CLAIMED IS:

1. An image processing device comprising:

an image size detecting section which detects a size of original image data;

a judging section which judges, based on a detection result of the image size detecting section, whether the size of the original image data in at least one of a horizontal direction and a vertical direction equals to an integral multiple of a size of a corresponding side of a reference block;

a processing value setting section which sets a processing value used for implementing an image processing with respect to a region of the original image data other than a region defined by the integral multiple of the size of the reference block if the judging section judges that the size of the original image data does not equal to the integral multiple of the size of the reference block; and

an image processing section which implements the image processing based on the processing value set by the processing value setting section.

2. The image processing device according to Claim 1, wherein the processing value set by the processing value setting section is determined based on

a processing value set with respect to the region defined by the integral multiple of the size of the reference block.

3. The image processing device according to Claim 1, wherein the processing value set by the processing value setting section is determined based on image data obtained by converting the size of the original image data to a size equal to the integral multiple of the size of the reference block.

4. The image processing device according to Claim 3, further comprising a re-converting section which returns the converted image size to the size of the original image data by size conversion.

5. The image processing device according to Claim 3, wherein the image processing section implemented an image processing with respect to the original image data before the size conversion with use of the processing value set by the processing value setting section.

6. An image processing device comprising:
an image size detecting section which detects a

size of original image data;

a judging section which judges, based on a detection result of the image size detecting section, whether the size of the original image data in at least one of a horizontal direction and a vertical direction equals to an integral multiple of a size of a corresponding side of a reference block;

a processing value setting section which sets a processing value used for implementing an image processing with respect to a region of the original image data other than a region defined by the integral multiple of the size of the reference block if the judging section judges that the size of the original image data does not equal to the integral multiple of the size of the reference block,

the processing value setting section including:

a zone dividing section which divides the original image data into first-zone image data and second-zone image data;

a first calculating section which calculates, reference block by block, a first preprocessing value used for implementing an image processing with respect to the first-zone image data; and

a second calculating section which calculates, fractional block by block, a second preprocessing value

used for implementing an image processing with respect to the second-zone image data based on the first preprocessing value, and wherein the processing value set by the processing value setting section is determined based on the first preprocessing value and the second preprocessing value, the first-zone image data having a size both in the horizontal direction and the vertical direction equal to the integral multiple of the size of the corresponding side of the reference block, the second-zone image data being a remainder of the image data obtained by removing the first-zone image data from the original image data; and

an image processing section which implements the image processing based on the processing value set by the processing value setting section.

7. The image processing device according to Claim 6, wherein the image processing is a shading correction of adjusting a gradation of the image data.

8. The image processing device according to Claim 7, wherein the second preprocessing value is a ground level of the image data corresponding to a brightness level on a ground portion of the image data, and the shading correction includes a ground

skipping/gradation correction in which a threshold value is set pixel by pixel based on the ground level, and a brightness level of the pixel is replaced with a possible maximal brightness level pixel by pixel if it is judged that the brightness level of the pixel exceeds the threshold value.

9. The image processing device according to Claim 6, wherein the reference block is a square.

10. The image processing device according to Claim 6, wherein the second calculating section calculates the second preprocessing value in accordance with a linear extrapolation based on the first preprocessing value calculated by the first calculating section to implement the image processing with respect to the second-zone image data, fractional block by block.

11. The image processing device according to Claim 6, wherein the first-zone image data is arranged at a substantially central part of the original image data to arrange the second-zone image data uniformly along a peripheral portion of the original image data.

12. The image processing device according to

Claim 6, wherein the second preprocessing value is obtained by a vertical preprocessing value which is defined in the vertical direction of the image data and a horizontal preprocessing value which is defined in the horizontal direction of the image data.

13. An image processing device comprising:

image size detecting means for detecting a size of original image data;

image size converting means for converting, based on a detection result of the image size detecting means, the size of the original image data both in a horizontal direction and a vertical direction to a size equal to an integral multiple of a size of a corresponding side of a reference block if the image size detecting means judges that the size of the original image data in at least one of the horizontal direction and the vertical direction does not equal to the integral multiple of the size of the corresponding side of the reference block;

image processing means for implementing an image processing with respect to the image data having the converted size; and

image size re-converting means for returning the size of the image data having the converted size to the size of the original image data by size re-conversion.

14. The image processing device according to Claim 13, wherein the image processing is a shading correction of adjusting a gradation of the image data.

15. The image processing device according to Claim 14, wherein the shading correction includes a ground skipping/gradation correction in which the original image data is divided based on the reference block to calculate a ground level, reference block by block, a threshold value is set pixel by pixel based on the calculated ground level in the reference block, and a brightness level of the pixel is replaced with a possible maximal brightness level pixel by pixel if it is judged that the brightness level of the pixel exceeds the threshold value.

16. The image processing device according to Claim 15, wherein the reference block is a square.

17. An image processing device comprising:

an image size detecting section which detects a size of original image data;

a judging section which judges, based on a detection result of the image size detecting section,

whether the size of the original image data in at least one of a horizontal direction and a vertical direction equals to an integral multiple of a size of a corresponding side of a reference block;

a processing value setting section which sets a processing value used for implementing an image processing with respect to a region of the original image data other than a region defined by the integral multiple of the size of the reference block if the judging section judges that the size of the original image data does not equal to the integral multiple of the size of the reference block,

the processing value setting section including:

image size converting means for converting the size of the original image data both in the horizontal direction and the vertical direction to a size equal to the integral multiple of the size of the corresponding side of the reference block if the judging section judges that the size of the original image data in the horizontal direction and the vertical direction does not equal to the integral multiple of the size of the corresponding side of the reference block; and

calculating means for calculating a first preprocessing value used for implementing the image processing with respect to the image data having the

converted size, reference block by block, and wherein the processing value set by the processing value setting section is determined based on the first preprocessing value calculated by the calculating means; and

an image processing section which implements the image processing based on the processing value set by the processing value setting section.

18. The image processing device according to Claim 17, wherein the image processing is a shading correction of adjusting a gradation of the image data.

19. The image processing device according to Claim 18, wherein the preprocessing value is a ground level of the image data, and the shading correction includes a ground skipping/gradation correction in which a threshold value is set pixel by pixel based on the ground level of the image data, and a brightness level of the pixel is replaced with a possible maximal brightness level pixel by pixel if it is judged that the brightness level of the pixel exceeds the threshold value.

20. The image processing device according to Claim 17, wherein the reference block is a square.